Amendments to the CLAIMS:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF CLAIMS:

1-30. (Canceled).

31. (Withdrawn) A device for etching a silicon body substrate (10) using an inductively coupled plasma (14), comprising: an ICP source (13) for generating a radio-frequency electromagnetic alternating field; a reactor (15) for generating the inductively coupled plasma (14) from reactive particles by the action of the radio-frequency electromagnetic alternating field on a reactive gas, and a first means for generating plasma power pulses to be injected into the inductively coupled plasma (14) by the ICP source (13).

32. (Withdrawn) The device according to Claim 31, wherein the first means is an ICP coil generator (17) which generates a variably adjustable, pulsed radio-frequency power with regard to the pulse to pause ratio of the plasma power pulses or the individual pulse power.

33. (Withdrawn) The device according to Claim 32, further comprising an impedance transformer (18) in the form of a balanced symmetrical matching network for matching an initial impedance of the ICP coil generator (17) to a plasma impedance which is dependent on the individual pulse power of the plasma power pulses to be injected.

34. (Withdrawn) The device according to Claim 33, wherein the impedance transformer (18) is preset in such a way that with a specified maximum individual pulse power of the plasma power pulses to be injected into the inductively coupled plasma (14) in the case of stationary power, a substantially optimum impedance matching is ensured.

35. (Withdrawn) The device according to Claim 32, wherein components are integrated into the ICP coil generator (17) which, via a variation of the frequency of the generated electromagnetic alternating field, perform impedance matching as a function of the individual pulse power to be injected.

36. (Withdrawn) The device according to Claim 35, wherein the ICP coil generator (17) includes an automatically acting feedback circuit having a frequency-selective component (1), the feedback circuit having at least one controlled power amplifier, a frequency-selective band filter with a stationary frequency (1'N) to be attained and a delay line (7) or a phase shifter.

37. (Withdrawn) The device according to Claim 31, further comprising a second means for generating a static or time-variable, particularly pulsed magnetic field between the substrate (10) and the ICP source (13).

38. (Withdrawn) The device according to Claim 37, wherein the first means is a magnetic field coil (21) with an associated power supply unit (23) or a permanent magnet, the magnetic field generated by the magnetic field coil (21) via the power supply unit (23) being time-variable, capable of being pulsed in particular.

39. (Withdrawn) The device according to Claim 31, further comprising a substrate voltage generator (12) which can apply a continuous or time-variable radio-frequency power, a pulsed radio-frequency power in particular, to a substrate (10) arranged on a substrate electrode (11).

40. (Withdrawn) The device according to Claim 39, further comprising a first impedance transformer (12) for impedance matching between the substrate voltage generator (12) and the substrate (10).

41. (Withdrawn) The device according to Claim 39, wherein an ICP coil generator (17) is connected to the substrate voltage generator (12) or a power supply unit (23).

42. (Currently Amended) A method for etching a silicon body substrate using a device having an ICP source for generating a radio-frequency electromagnetic alternating field, a reactor for generating an inductively coupled plasma from reactive particles by the action of the radio-frequency electromagnetic alternating field on a reactive gas, and a first means for generating plasma power pulses to be injected into the inductively coupled plasma by the ICP source, comprising:

matching an impedance of one of an inductive coupled plasma and the ICP source to an ICP coil generator; and

injecting a pulsed radio-frequency power into the inductively coupled plasma as a pulsed plasma power;

wherein the pulsing of the injected, pulsed radio-frequency power is accompanied by a change of a frequency of the injected, pulsed radio-frequency power, the change in the frequency being controlled so that the plasma power injected into the inductively coupled plasma during the pulsing is maximized;

wherein the ICP coil generator causes a variation of the frequency of the radio-frequency electromagnetic alternating field so that the impedance is matched as a function of the pulsed plasma power to be injected, so as to provide rapid switching between the pulses of the pulsed plasma power and interpulse periods;

wherein the variation of the frequency is automatically performed by a Meissner oscillator feedback loop between the ICP coil and the ICP coil generator input without measuring the ratio of magnitudes of applied and reflected power of the generator.

43. (Previously Presented) The method according to Claim 42, wherein the pulsed plasma power is injected via an ICP source to which a radio-frequency electromagnetic alternating field having a constant frequency or a frequency which varies within a frequency range is applied around a stationary frequency.

44. (Previously Presented) The method according to Claim 42, wherein the pulsed radio-frequency power is generated with an ICP coil generator which is pulse-operated with a frequency of 10 Hz to 1 MHz and pulse to pause ratio of 1:1 to 1:100.

45. (Previously Presented) The method according to Claim 42, wherein a plasma power of 300 watts to 5000 watts on a time average is injected into the inductively coupled plasma and that the generated individual pulse powers of the radio-frequency power pulses are between 300 watts and 20 kilowatts.

46. (Canceled).

47. (Previously Presented) The method according to Claim 42, wherein during the etching, one of a static and time-variable magnetic field is generated, the direction of which is at least one of approximately and predominantly parallel to a direction defined by the connecting line of the substrate and the inductively coupled plasma.

48. (Previously Presented) The method according to Claim 47, wherein the magnetic field is generated in such a way that it extends into the area of the substrate and the inductively coupled plasma and has a field strength amplitude between 10-mTesla and 100 mTesla in the interior of the reactor.

49. (Previously Presented) The method according to Claim 47, wherein a magnetic field pulsed at a frequency of 10 Hz to 20 kHz is generated via the power supply unit, the pulse to pause ratio when the magnetic field is pulsed being between 1:1 and 1:100.

50. (Previously Presented) The method according to Claim 42, wherein one of a constant and time-variable radio-frequency power is applied to the substrate via a substrate voltage generator.

51. (Previously Presented) The method according to Claim 50, wherein the pulse duration of the radio-frequency power injected into the substrate is between one to one

hundred times the period of oscillation of the high-frequency fundamental component of the radio-frequency power.

52. (Previously Presented) The method according to Claim 50, wherein the radio-frequency power applies a time-average power of 5 watts to 100 watts to the substrate, a maximum power of an individual radio-frequency power pulse being one to 20 times the time average power.

53. (Previously Presented) The method according to Claim 51, wherein the frequency of the injected radio-frequency power is between 100 kHz to 100 MHz and a pulse-to-pause ratio of the injected radio-frequency pulses is between 1:1 and 1:100.

54. (Previously Presented) The method according to Claim 42, wherein the pulsing of the injected plasma power and one of the pulsing of the radio-frequency power injected into the substrate via the substrate voltage generator and a pulsing of a magnetic field, the pulsing of the injected plasma power and the pulsing of the radio-frequency power injected into the substrate via the substrate voltage generator are one of time-correlated and synchronized with each other.

55. (Previously Presented) The method according to Claim 54, wherein the correlation takes place in such a way that the magnetic field is first applied, before a radio-frequency power pulse of the ICP coil generator, and the magnetic field is switched off again after the decay of this radio-frequency power pulse.

56. (Previously Presented) The method according to Claim 54, wherein the correlation takes place in such a way that during a radio-frequency power pulse of the ICP coil generator, the radio-frequency power injected into the substrate via the substrate voltage generator is switched off and/or that during a radio-frequency power pulse injected into the substrate via the substrate voltage generator, the radio-frequency power injected via the ICP coil generator is switched off.

57. (Previously Presented) The method according to Claim 54, wherein the synchronization takes place in such a way that during each time of a plasma power pulse injected into the plasma via the ICP coil generator, radio-frequency pulses injected into the substrate via the substrate voltage generator are also applied to the substrate.

58. (Previously Presented) The method according to Claim 54, wherein the correlation takes place in such a way that the radio-frequency power injected into the substrate via the substrate voltage generator is generated in each case during a power rise

and/or a power drop of a radio-frequency power pulse injected into the plasma via the ICP coil generator.

59. (Previously Presented) The method according to Claim 54, wherein the correlation takes place in such a way that during the time of the plasma power pulses injected into the plasma via the ICP coil generator and during the time of the pulse pauses between the individual plasma power pulses injected into the plasma via the ICP coil generator, at least one radio-frequency power pulse injected into the substrate via the substrate voltage generator is applied to the substrate in each case.

60. (Previously Presented) The method according to Claim 42, wherein the etching takes place in alternating etching and passivation steps at a process pressure of 5 μbar to 100 μbar.

61. (Previously Presented) The method according to Claim 45, wherein the radio-frequency power pulses are between 2 kilowatts to 10 kilowatts.

62. (Previously Presented) The method according to Claim 47, wherein one of the static and time-variable magnetic field is one of periodically varying and pulsed magnetic field.

63. (Previously Presented) The method according to Claim 50, wherein one of the constant and time-variable radio frequency power is a pulsed, radio-frequency power.

64. (Previously Presented) The method according to Claim 50, wherein a pulse duration of the radio-frequency power injected into the substrate is between one to ten times a period of oscillation of the high-frequency fundamental component of the radio-frequency power.

65. (Previously Presented) The method according to Claim 51, wherein the pulse duration is between one to ten times.

66. (Previously Presented) The method according to Claim 52, wherein the maximum power of an individual radio-frequency power pulse is between twice to 10 times the time average power.

67. (Previously Presented) The method according to Claim 53, wherein the frequency of the injected radio-frequency power is 13.56 MHz.

68. (Previously Presented) The method according to Claim 53, wherein the pulse-to-pause ratio of the injected radio-frequency pulses is between 1:1 and 1:10.

69. (Previously Presented) The method according to Claim 42, wherein the pulsed plasma power is in a kilowatt range.

70. (Previously Presented) The method according to Claim 42, wherein the pulsed plasma power is above 3 kilowatts.

71. (Previously Presented) The method according to Claim 42, wherein the ICP coil generator includes integrated components.

72. (Canceled).

73. (Canceled).